

**We claim:**

- 1. A method of marking a solid article or substance, comprising the following steps:**
  - dissolving a water-insoluble medium in a first solvent to form a first mixture;**
  - mixing a nucleic acid solution with an intermediate solution to form a second mixture;**
  - mixing the second mixture with the first mixture to form a homogenous third mixture;**
  - marking the article or substance with the third mixture containing said nucleic acid; and**
  - drying the labeled article or substance;**
  - wherein the medium is an inert medium and is not deteriorative to the article or substance, and**
  - wherein the intermediate solution increases the miscibility between the first mixture and the second mixture.**
- 2. The method as claimed in claim 1, wherein the water-insoluble medium is a polymeric substance.**
- 3. The method as claimed in claim 2, wherein the polymeric substance is selected from a group consisting of polycarbonate (PC), polymethyl methacrylate (PMMA), polystyrene (PS), and polypropylene (PP).**
- 4. The method as claimed in claim 1, wherein the first solvent is a non-polar solvent.**
- 5. The method as claimed in claim 4, wherein the non-polar solvent is selected from a group consisting of chloroform, dichloromethane, xylene and toluene.**
- 6. The method as claimed in claim 1, wherein the intermediate solution is a semi-polar solvent.**
- 7. The method as claimed in claim 6, wherein the intermediate solution is selected from a group consisting of methanol, ethanol, acetone, glycerol and their mixture.**

8. The method as claimed in claim 1, wherein the nucleic acid is selected from a group consisting of a natural and a synthetic nucleic acid.
9. The method as claimed in claim 8, wherein the synthetic nucleic acid is a synthetic vector.
10. The method as claimed in claim 8, wherein the synthetic nucleic acid is a nucleic acid fragment.
11. A method of marking a water insoluble liquid, comprising the following steps:
  - dissolving a nucleic acid in a aqueous solution to form a first mixture;
  - mixing the first mixture with an intermediate solution to form a second mixture;
  - mixing the second mixture with a water insoluble solvent to form a homogenous third mixture; and
  - mixing and marking the liquid with the third mixture;
  - wherein the intermediate solution increases the miscibility between the second mixture and the water insoluble solvent.
12. The method as claimed in claim 11, wherein the water insoluble solvent is a non-polar solvent.
13. The method as claimed in claim 12, wherein the non-polar solvent is selected from a group consisting of chloroform, dichloromethane, xylene and toluene.
14. The method as claimed in claim 11, wherein the intermediate solution is a semi-polar solvent.
15. The method as claimed in claim 14, wherein the intermediate solution is selected from a group consisting of methanol, ethanol, acetone, glycerol and their mixture.
16. The method as claimed in claim 11, wherein the nucleic acid is selected from a group consisting of a natural and a synthetic nucleic acid.
17. The method as claimed in claim 16, wherein the synthetic nucleic acid

comprises a synthetic vector.

- 18.** The method as claimed in claim **16**, wherein the synthetic nucleic acid comprises a nucleic acid fragment.